

ART. VII. *The Dispensatory of the United States.* By GEORGE B. WOOD, M. D. Professor of Materia Medica and Pharmacy in the Philadelphia College of Pharmacy; Member of the American Philosophical Society, &c. &c.; and FRANKLIN BACHE, M. D. Professor of Chemistry in the Philadelphia College of Pharmacy; one of the Secretaries of the American Philosophical Society. Philadelphia, 1853, pp. 1073.

THE irregular and apparently capricious manner in which most, if not all, the sciences have advanced in their career of usefulness and certainty, can scarcely have failed to have been noticed by the attentive observer. Their march has, in fact, been characterized by marked alternations of inactivity and rapid advances, or even in some instances, by retrograde movements. Neither has the progress of the whole been simultaneous; on the contrary, in every age some one has exercised an overweening influence, and after having enjoyed its sway for an indefinite period, gradually gave way to the increased popularity of another.

These remarks will also hold good as respects the different branches of the same science, and to none are they more applicable than to the pharmaceutic art, whose vicissitudes and alternate subjection to one or other of its kindred sciences are both interesting and instructive. It is also an extraordinary fact, that notwithstanding the great improvements which have been effected in this division of the medical art, that the value and practical utility of the records of these improvements should not have increased in an equal ratio. Thus too many of our Dispensatories instead of being a "chronicle of the times," present us with the opinions and learning of by-gone ages. Now, no science has been more modified by the lapse of years than that of pharmacy; and whatever may be our esteem and admiration of the precepts and doctrines of our forefathers, every day presents this art in aspects and circumstances of so different a character, as to render a consideration of its present state of paramount importance.

We, therefore, hailed with no inconsiderable pleasure the appearance of the *Dispensatory of the United States*, convinced from our knowledge of its authors, that it would prove a most valuable addition to our medical literature. We have not been disappointed in these expectations, and feel fully persuaded that it will take the first rank among works of this character.

We are for the first time presented with a *Dispensatory* in the English language, which is not a mere *rifacimento* of that of LEWIS,

the general basis on which all subsequent publications of this nature have hitherto been constructed; added to and altered it is true, in many important particulars, but still retaining the strongest marks of the antiquity of their chief materials. We do not by this intend to say that the components of the present work are all, or in any proportion original, as from its very nature it ought necessarily to be constructed of such as had already been tested.

The duties of the authors of works of this description, are by patient industry and diligent research to gather in a small compass the experience and observations of others, however diffused through voluminous records, or floating in a traditionary form on the shoreless ocean of knowledge. To such a collection of materials they must apply the analytical and synthetical processes of judgment, selection and combination, so as to present their spirit and substance condensed into plain and practical results. These duties have been most satisfactorily performed by Drs. Wood and Bache, who have displayed in the accomplishment of their difficult task, a rare combination of untiring industry, extensive learning, and sound judgment.

The Dispensary of the United States is divided into two parts, the first of which, and much the largest, is devoted to a consideration and description of the various articles of the *materia medica*; and the second to the various pharmaceutical preparations of these articles. The objects of the authors in their arduous undertaking are thus stated in their preface. After speaking of the Dispensaries of Duncan and Thomson, they observe that these works—

“Were calculated especially for the sphere of Great Britain, and are too deficient in all that relates exclusively to this country, to admit of being received as standards here. In the history of our commerce in drugs, and of the nature, growth, and collection of our indigenous medical plants; in the chemical operations of our extensive laboratories; and in the modes of preparing, dispensing, and applying medicines, which have gradually grown into use among us, there is much that is peculiar, a knowledge of which is not to be gained from foreign books, and is yet necessary to the character of an accomplished American pharmacist.”

This design has been accomplished in a far greater degree than could have been expected, even by the most sanguine; and we are presented with details respecting our drug markets, and the processes and products of our laboratories, that cannot fail to prove of extreme importance. In this almost untrodden field the authors have spared no labour or research, though it must be admitted that much, very much, yet remains to be effected; for in no part of the apothecary's business does there exist a more lamentable ignorance, than of the

origin and distinction of closely allied articles of the *materia medica*. It must strike the merest tyro in the profession, that there are a vast number of articles constantly thrown into our drug market under a common appellation, whose origin, and even in some cases, whose properties are essentially different. Thus, under the names of gum Arabic, gum tragacanth, catechu, senna, and many others, we are presented with a variety of dissimilar articles. In making these observations, we do not intend to censure the authors for not having gone more fully into this subject; on the contrary, we have been highly gratified to perceive how much they have accomplished, in this laborious part of their undertaking. To perfect the task must require a long time, and the united and persevering efforts of many.

"The *Pharmacopœia* of the United States has been adopted as the basis of this *Dispensatory*. It is followed both in its general division of medicines, and in its alphabetical arrangement of them under each division. Precedence is, in every instance, given to the names which it recognises; while the explanations by which it fixes the signification of these names, are inserted in immediate connexion with the titles to which they severally belong. Every article which it designates is more or less fully described; and all its processes, after being literally copied, are commented on and explained, whenever comment or explanation appeared necessary."

"But though precedence has thus been given to the *Pharmacopœia* of the United States, those of Great Britain have not been neglected. The nomenclature adopted by the different British Colleges, and their formulæ for the preparations of medicines, have been so extensively followed throughout the United States, that a work intended to represent the present state of pharmacy in this country would be imperfect without them. The *Pharmacopœias* of London, Edinburgh and Dublin, have therefore been incorporated in all their essential parts into the present work. The medicines directed by the British Colleges are all described, and their processes either copied at length, or so far explained, as to be intelligible in all essential particulars."

This plan is the only one that can rescue pharmacy from the irregular and confused state in which it has existed in this country; and it is imperative on both physicians and apothecaries to take the United States *Pharmacopœia* as their text book, as far as practicable; for even granting that it is not as satisfactory as could be wished in all its details, still it is far superior to any work of the kind that has emanated from the American press. The science of pharmacy can never attain the rank to which its usefulness entitles it, without a consentaneous feeling among its votaries, and a firm determination to promote the general good, regardless of sectional feeling, or mere mercenary competition. At present, with the exception of those who have felt the ill effects of this want of uniformity, and have adopted the National *Pharmacopœia* as their guide, there is the most utmost dis-

crepancy in the different sections of our country, not only in the nomenclature, but also in the strength of the different medicinal preparations. It is to be lamented that the proposal made by VAN MOSS in the preface to his *Pharmacopœia*, that there should be a convention of deputies from all the states of Europe, to establish an uniformity of pharmaceutical practice, had not been adopted; what an elevated station would pharmacy have now occupied, if the labours of all her votaries had been turned in one direction, instead of being, as they now are, diverted into so many different channels?

At the same time, we should be sorry to see any *Pharmacopœia* forced on the two professions by legal enactments; the observance of the receipts and directions of such a work should always depend upon their intrinsic excellence and general expediency, or else they will necessarily be contravened, whenever it is deemed fit and reasonable.

As we before mentioned, the *United States Dispensary* is divided into two parts, or into a consideration of the articles in their simple and compound forms. The short and necessarily imperfect treatise on chemistry, which is subjoined to most works of this character under the title of *Elements of Pharmacy*, has been judiciously omitted; the addition of such matter only swelling a volume, without being of any positive utility. By thus treating on the different articles in their commercial and pharmaceutical states, all the directions which have reference to the practical operations of the apothecary are found in one place, and are of more ready access, than if mingled with other matters.

“Under the head of *materia medica*, therefore, in this *Dispensary*, we treat of medicines in the state only in which they are produced by nature, or come into the hands of the apothecary. Of these medicines, such as are recognised by our *National Pharmacopœia* are most minutely described; but we consider also all that are included in the officinal catalogues of the *British Colleges*, and some others which appear to deserve attention from their present form, or former reputation.”

The authors have adopted an alphabetical arrangement, instead of attempting to class the different articles of the *materia medica* according to their supposed therapeutical or physiological effects on the human system; thus avoiding the difficult task of presenting a new classification of remedies, founded on the recent improvements in medical science, or of being obliged to consider the same substance under different heads, which although indispensable in a work on therapeutics is ill adapted for a book of reference; at the same time, when treating on each article, they have subjoined an account of its properties and remedial effects.

The plan pursued in describing the different substances is uniform; the official name being first given, which is as far as possible that recognised in the United States Pharmacopœia; this is followed by its English or vulgar name; next its definition, and its official synonyms in the three dispensatories of the British empire, to which is added its appellations in several foreign languages; these are succeeded by its classification as an object of natural history, with a succinct but well digested account of its habit, mode of growth, &c. We are then presented with its commercial history, properties and medical uses; this portion of the work is exceedingly valuable, and displays great research, acumen and judgment. To enable such of our readers, as have not seen the original to judge for themselves of the manner in which this is executed, we subjoin a specimen taken at random.

AMMONIACUM, U. S., Lond., Ed., Dub.

*Ammoniac.*

"*Heracleum gummiiferum*, Succus concretus. *The concrete juice.*" U. S.

"*Gomme ammoniacque*, Fr.; *Ammoniak*, Germ.; *Gomma ammoniaco*, Ital.; *Goma amoniaco*, Span.; *Ushek*, Arab.; *Semugh velsherun*, Persian.

"Much uncertainty has existed among botanists as to the plant which yields ammoniac. It was generally believed to be a species of *Ferula*, till Willdenow raised from some seeds mixed with the gum resin found in the shops, a plant which he ascertained to be an *Heracleum*, and named *H. gummiiferum*, under the impression that it must be the true source of the medicine. On his authority, the plant has been adopted by the British colleges, and is recognised in our National Pharmacopœia. Willdenow expressly acknowledges that he could not procure from it any gum resin, but ascribes the result to the influence of climate. The *Heracleum*, however, does not correspond exactly with the representations given of the ammoniac plant by travellers; and Sprengel has ascertained that it is a native of the Pyrenees, and never produces gum. By this botanist it is named *H. pyrenaicum*, though before described by Lapeyrouse under the name of *H. amplifolium*. (*Merat and De Lens.*)

"Mr. Jackson, in his account of Morocco, imperfectly describes a plant indigenous in that country, supposed to be a species of *ferula*, from which gum ammoniac is procured by the natives; but it may be doubted whether its product is the true ammoniac of the shops, which is derived exclusively from Persia. Two English officers, Colonel Johnson and Captain Hart, have seen the real Persian plant, and given such imperfect accounts of it as might be expected from intelligent travellers, wholly ignorant of botany; M. Fontanier, a man of science, who was sent by the French government into the Levant, and resided many years in Persia, saw it growing in the province of Fars. By the last mentioned gentleman, a drawing of the plant with specimens was transmitted to Paris. From these it is inferred to be a species of *ferula*; and Merat and De Lens propose for it the name originally applied to it by

Lemery, of *F. ammonifera*. It would appear, however, from a very recent notice, that specimens of the plant obtained in Persia by Colonel Wright, and examined by Mr. David Don, prove it to belong to a genus allied to *Ferula*, but essentially different; and named by Mr. Don, *Dorema*. We are promised a description of it under the name of *D. ammoniarum*, in the transactions of the Linnæan society for the year 1831. (*Journ. de Pharm. Avril*, 1831.)

"The ammoniac plant grows spontaneously in Farsistan, Irauk, and other Persian provinces; in the southern districts of Arabia, and perhaps in the north of Africa. It attains the height of six or seven feet, and in the spring and early part of the summer abounds in a milky juice, which flows out upon the slightest puncture. From the accounts of travellers, it appears, that in the month of May, the plant is pierced by an insect of the beetle kind. The juice exuding, through the punctures, concretes upon the stem, and when quite dry is collected by the natives. M. Fontanier states that the juice exudes spontaneously, and that the harvest is about the middle of June. The gum resin is sent to Bushire whence it is transmitted to India. It reaches this country usually by the route of Calcutta. The name *gum ammoniac* is thought to have been derived from the temple of Jupiter Ammon in the Lybian desert, where the drug is said to have been formerly collected.

"*Properties.*—Ammoniac comes either in the state of separate tears, or in aggregate masses, and in both forms is frequently mixed with impurities. That of the tears, however, is preferable, as the purest may be conveniently picked out and kept for use. These are of an irregular shape, usually more or less globular, opaque, yellowish on the outside, whitish within, compact, homogeneous, brittle when cold, and breaking with a conchoidal shining fracture.

"The masses are of a darker colour and less uniform structure, appearing when broken, as if composed of numerous white or whitish tears imbedded in a dirty-gray or brownish substance, and frequently mingled with foreign matters, such as seeds, fragments of vegetables and sand, or other earth.

"The smell of ammoniac is peculiar, and stronger in the mass than in the tears. The taste is slightly sweetish, bitter and somewhat acrid. The sp. gr. is 1.207. When heated, the gum resin softens and becomes adhesive, but does not melt. It burns with a white flame, swelling up, and emitting a smoke of a strong, resinous, slightly alliaceous odour. It is partly soluble in water, alcohol, ether, vinegar and alkaline solutions; more completely in the volatile oils, ethereal spirit and ammoniated alcohol. Triturated with water, it forms an opaque milky emulsion, which becomes clear upon standing. The alcoholic solution is transparent, but is rendered milky by the addition of water. Braconnot obtained from 100 parts of ammoniac, 18.4 parts of gum, 70 of resin, 4.4 of a substance resembling gluten, (*bassorine*,) and 6 of water. The remainder was lost. A volatile oil, in minute proportion, is probably among the ingredients, as water distilled from ammoniac has its peculiar odour.

"*Medical properties and uses.*—This gum resin is stimulant and expectorant, in large doses cathartic, and like many other stimulants, may be so given as occasionally to prove diaphoretic, diuretic or emmenagogue. It has been employed in medicine from the highest antiquity, being mentioned in the writings of Hippocrates. The complaints in which it is most frequently used, are chronic catarrh, asthma, and other pectoral affections attended with deficient expecte-

ration without acute inflammation, or with too copious secretion from the bronchial mucous membrane dependent upon debility of the vessels. It is thought to have been useful in some cases of amenorrhœa, and in those chlorotic and hysterical conditions of the system arising out of this complaint. It has also been prescribed in obstructions or chronic engorgements of the abdominal viscera, under the vague notion of its deobstruent powers. Any good which it may do in these affections, is more probably ascribable to its revulsive action upon the alimentary mucous membrane. Authors speak of its utility in long and obstinate colics dependent on mucous matter lodged in the intestines; but it would be difficult to ascertain in what cases such mucous matter existed, and, even allowing its presence, to decide whether it was a cause or a result of the diseased action. Ammoniac is usually administered in combination with other expectorants, with tonics or emmenagogues. It is much less used than formerly. Externally applied in the shape of a plaster, it is thought to be useful as a discutient or resolvent in white swellings of the joints and other indolent tumours. (See *Emplastrum ammoniaci*.)

"It is given in substance, in the shape of pill or emulsion. The latter form is preferable, (See *Mistura ammoniaci*.) The dose is from ten to thirty grains.

"*Off. Prep.*—*Emplastrum ammoniaci*, *U. S., Lond., Ed., Dub.* *Emplastrum ammoniaci cum Hydrargyro*, *Lond., Dub.* *Emplastrum gummosum*, *Ed.* *Mistura ammoniaci*, *U. S., Lond., Dub.* *Pillule scillæ composite*, *Lond., Ed., Dub.*"

Such is the manner in which the authors have treated on the different articles of the materia medica, and although there is nothing new in the plan, it will at once be perceived by every one acquainted with the different dispensatories, that the present is much fuller and more precise in its details, and that the information conveyed is brought up to the present state of science. This in fact, is the great desideratum in a work of this character. The apothecary and physician have been in want of a book of reference to which they could confidently refer, for the latest improvements in science; the opinions of the early writers are now of little practical importance, however interesting they may be to the antiquary or man of letters.

As before observed, Drs. Wood and Baché have closely followed the National Pharmacopœia in their pharmaceutical nomenclature; which is certainly one of the best now used in such works, though even this, we think is deficient in many particulars. The attempt that has been made to adapt the language of pharmacy, to every change of names in chemistry and natural history has been of serious disadvantage, and has created confusion and uncertainty instead of the precision that was anticipated. Hence although the revisers of our National Pharmacopœia have done much, they did not go far enough, and instead making a radical reform, they have been content with partial alterations.

As an example of the evils attendant on an attempt to adapt the

nomenclature of pharmacy to the constant changes which are daily made in the scientific names of other sciences, we need only advert to corrosive sublimate, which after having successively borne the appellations of *Murias hydrargyri corrosivus*, *Murias hydrargyri oxydatus preparatus*, *Hydrargyrum muriaticum corrosivum*, *Murias hydrargyri*, *Murias hydrargyri super-oxygenatus*, *Hydrargyri oxy-murias*, *Deuto-chloruretum hydrargyri*, is finally presented to us as *Hydrargyrum chloridum corrosivum*. The same variations have taken place in the names of substances derived from the vegetable and animal kingdoms; thus the Spanish fly after having in turn been *Cantharis*, *Meloe*, and *Lytta*, is again permitted to assume the appellation of *Cantharis*; and Cardamoms has appeared in the different Pharmacopœias as *Amomum*, *Elettaria*, *Matonia*, and has now, and we hope finally, been found to belong to the genus *Alpinia*. On the other hand, substances derived from more than one vegetable are all referred to one species, and that perhaps a different one, according to the authority consulted.

This state of things has been strongly felt, and has engaged the attention of many distinguished men, among the rest HUFELAND has written an address to physicians on the necessity of adhering to the officinal name of drugs, a sentence from which we will quote as perfectly accordant with our own views on this subject. “Le mal est urgent, et menace de s’étendre de jour en jour. Il est tems d’y mettre un terme. Le remède est facile; il ne tient qu’à nous d’en faire usage, et j’ai cru devoir prendre la parole et de traiter la chose publiquement, afin de solliciter et d’obtenir l’attention et l’assistance de mes collègues. Il ne faut pour cet effet que la reunion de tous les medecins praticiens et académiciens, et de leur part l’engagement inviolable, de se servir dans leurs ordonnances que des anciens termes.”

As, however, such a combination can scarcely be expected to take place, it is the more incumbent on those who appear as the leaders in pharmaceutical science, not to stop at half way measures, but to boldly adopt a uniform nomenclature and to adhere to it strictly, regardless of the changes that may occur in the phraseology of chemistry and natural history. Their example will sooner or later be followed, and we shall, at least, have a simple language, not overwhelmed with long lists of synonymes.

In turning over the pages of the United States Dispensatory, we made some notes and observations on what appeared new, or on which we differed from the learned authors; these are of course of a desultory character, as to attempt a critical analysis of each sub-



ject would require more time and science than we can bring to the task.

*Acetum*.—In the account of the manufacture of this article, we were surprised to find that the various methods by which vinegar is made in large quantities, both in this country and Europe in forty-eight hours to four days, have not been noticed. No inconsiderable proportion of the weak vinegars used for certain manufacturing purposes in this city, are made from a combination of potatoe juice, malt and whiskey.

*Acidum arseniosum*.—This is well treated on, but we are sorry that the authors were not able to avail themselves of the series of well conducted experiments on arsenic, and some of its compounds lately published by Dr. MITCHELL and Mr. DURAND, which correct many erroneous statements as regards the volatility, solubility, &c. of this perplexing substance. In their medico-legal observations on this and other poisons, we are glad to see that they extract largely from the excellent work of Dr. CHRISTISON.

*Acidum muriaticum*.—In retaining this name, instead of using the term *Acidum hydrochloricum*, the authors have followed other authorities, but we think they have conceded too much in this, particularly as they admit the compounds of chlorine and the alkalies under the appellations of chlorides, when in a dry state, whilst in solution, they term them muriates; this makes a confusion in the nomenclature that might have been avoided. Not that we object to the term *Acidum muriaticum*, for, as we before observed, we are of opinion that no good has resulted in pharmacy by change of names, but as the term chlorine is universally adopted, its compounds should also bear the family appellation.

*Acidum nitricum*.—The following correction of an error is important:—

“We have stated above, that the red acid of the Edinburgh College is erroneously called nitrous acid. It is in fact, nitric acid holding nitric oxide in solution. Indeed, the acid of the other colleges is, to a certain extent, of the same nature, as it is generally yellow from the presence of a small quantity of the same gas. Real nitric acid is perfectly colourless. Nevertheless, it may be proper to add, that according to the equivalent numbers, if we suppose two equivalents of nitric acid, united to one equivalent of nitric oxide, the compound would correspond to three equivalents of nitrous acid.”

*Acidum oxalicum*.—To the list of substances that contain this acid in considerable quantities, may be added the sumach, the efflorescence on the berries of which, is composed of super-oxalates, and malates of potash and limes.

*Aloe*.—This article displays great research and judgment on the part of the authors, and we should be tempted to lay it before our readers, were it not for its length. Do they not, however, go too far in saying, that “very little hepatic aloes comes to this country;” we have repeatedly met with it not only under this name, but also when of a good quality under that of socotrine.

*Alumen*.—The following may be new to most of our readers:—

“Alum has not been an article of import into the United States since 1818, or a year or two earlier, the demand since then having been entirely supplied by the domestic manufacture. There are at present six establishments in the United States where alum is manufactured; namely, two in Baltimore, one in New York, and three in Massachusetts, at Salem, Roxbury and Newton. The aggregate quantity made in these works, may be estimated at from a thousand to twelve hundred tons. The method employed consists in the direct combination of sulphuric acid with clay. Lately, however, Messrs. Tyson and Ellicott, manufacturing chemists of Baltimore, have commenced working the ore found at Cape Sable, on Magothy river, Maryland. This ore, which was extensively worked during the late war, under the superintendence of Dr. Troost, consists of lignite, clay, sulphuret of iron and sand. It exists in beds of from six to ten feet in thickness, covered by a stratum of sand. It is dug up and thrown in heaps of from one to three thousand tons, is set on fire and continues to burn for years. The ashes are transported to the manufactory, where they are lixiviated and evaporated in leaden vessels. When the solution indicates about 25° of Baume’s hydrometer, sulphate of potassa is added, after which it is drawn off to crystallize. At the end of about a week, the crystallization having been completed, the mother waters are pumped off, and the crystals, after being washed and drained, are dissolved in leaden boilers. From these the solution is transferred to the refining vessels, and left for about three weeks to crystallize.”

*Antimonium*.—The authors have adopted, we perceive, the current belief, that it is to BASIL VALENTINE that we are indebted for the general introduction of this metal and its compounds as a medicinal substance; but it has been most satisfactorily proved that the *Carrus triumphalis antimonii* was not published till long after his death, and appears to have been written by a disciple of the celebrated PARACELSUS.

*Argentum*.—Under this head it is stated that the process for obtaining the silver from the ores is somewhat similar to that pursued at Freyberg; we have always been led to believe that it differed in almost every particular; at all events, the ores of South America have been more successfully worked by the natives, than by the German miners sent out there.

*Asclepias*.—We find it stated, the *A. incarnata* and *A. syriaca* possess properties similar to those of *A. tuberosa*, is not this an over-

sight? the latter species is peculiar from its affording none of the acrid milky juice, so plentiful in the others, and which allies them to the apocynum in therapeutic effects.

*Baryte carbonas.*—Is it not an error to say that it has not been found in the United States? SILLIMAN, Vol. II. p. 374, on the authority of RAFINESQUE, states that it occurs in large quantities near Lexington, in Kentucky. The same remark may be made as regards bismuth; this metal being found at other localities besides that mentioned.

*Brominum.*—The account of this new medical agent is interesting, though we doubt if it will ever be extensively used; further experiments with it can only determine its true rank as a therapeutic agent. The bromide of iron, from what we have seen of it, appears exceedingly analogous in every particular to the hydrochlorate.

*Calamus.*—We observe that it is said this root “was in high repute among the ancients, and its virtues are celebrated in the works of PLINY and DIOSCORIDES.” What plant furnished the calamus of the ancients is extremely uncertain, and the research has occupied the attention of some of the most learned pharmacists of Europe, but as yet their labours have been attended with any thing but satisfactory results.

*Lapilli cancerorum.*—Under the names of crab’s eyes, we not only find the gastric concretion spoken of, but also the calcareous opercula of some marine shells. This fraud is of no consequence, as the composition of both is almost identical.

*Calcis chloridum.*—This subject is ably treated on, though the later experiments on the chlorides of oxides have thrown much light on their composition and habitudes.

*Chenopodium.*—For medical uses there appears to be very little difference between the *C. anthelminticum* and *C. ambrosioides*, and we know that they are indiscriminately used by the preparers of the wormseed oil.

*Cahinca.*—As this has never before appeared in our Dispensatories, and has attracted much attention from its reputed virtues in dropsy, it may be interesting to our readers to have a short abstract of the account of it given by Drs. Wood and Bache.

It appears that this medicine is furnished by several species of the genus *Chiococca*, all natives of South America; hence the external characters of it as found in commerce, are subject to slight variations. The root is the part employed. This is of a reddish-brown colour, and consists of cylindrical pieces, from the thickness of a straw to that of the little finger, somewhat bent or contorted, slightly striated longitudinally, presenting at certain distances small, irregular tubercles. The cortical portion, which is of a resinous character, has a

bitter disagreeable taste, somewhat acrid and astringent; the ligneous portion is tasteless. The medical virtues of the root are almost exclusively confined to the cortical portion. They are extracted by water and alcohol.

*Cahinca* is tonic, diuretic, purgative and emetic. In Brazil it has long been used as an antidote against the bites of venomous snakes. But it owes its celebrity to its powers in the cure of dropsy, in which it is considered by some practitioners as superior to all other remedies. It is employed in substance, decoction, extract or tincture.

*Cinchona*.—The article on cinchona is more than usually extensive, and embodies a mass of information on the natural and commercial history of the drug of great interest and value, which we should be glad to transfer to our pages, were it not for its great length, we must therefore be content with recommending it as the most satisfactory account of this important drug, that has yet appeared. The same remarks are applicable to our authors description of the cinnamon, with which they have properly incorporated that of cassia, which, as it appears in our market, is certainly in many instances true cinnamon, added to which, there is no absolute criterion by which they can be separated, more especially as respects their medicinal properties.

*Digitalis*.—The following remark respecting this drug is worthy of attention, and is applicable to many of the more delicate vegetable remedies thus prepared. Much of the medicine kept in our shops is obtained from the settlement of the Shakers in New York, and is in the state of oblong compact masses, into which the leaves are probably compressed, before they are thoroughly dried; at least the cakes when opened are not unfrequently found to be somewhat mouldy. This mode of preparing the drug is highly objectionable, and it is not surprising that our practitioners are so frequently disappointed in its effects.

*Euphorbia*.—We would draw the attention of the authors to another native species of this genus, the *E. hypericifolia* which differs essentially in its properties from those described by them, and which if it should be found on a more extensive trial to warrant the eulogies bestowed on it, will be well worthy of a place in their next edition.

*Ferri ferrocyanas*.—With regard to the remedial properties of this article in intermittent fevers, we are more than sceptical, from the actual employment of it in the treatment of a great number of cases of this disease, during its prevalence several years since. In these instances the variety recommended by Dr. ZOLLICKOFFER was used. It has also proved inefficacious in the hands of many other practitioners in this city and elsewhere.

*Fucus*.—Instead of the *F. vesiculosus*, would it not have been more advantageous to have given the *F. helminthochortos*. The first of these has no peculiar advantage over any other marine plant containing iodine in small quantities, whilst the latter maintains a high rank among the European anthelmintics.

*Gambogia*.—A variety of this drug sometimes appears in our market, which betrays evidences of a different preparation, if not of a different origin from that described by Drs. Wood and Bache. This in cakes with a convex bottom, having a dull and granular appearance.

*Ichthyocolla*.—The following respecting the preparation of Isinglass in the United States will probably be new to most of our readers.

“Isinglass of good quality is now obtained in New York, from the weak fish, and perhaps others caught in the neighbourhood. The sounds are dried whole, or merely slit open, and vary much in size and texture, weighing from a drachm up to an ounce. Another kind of inferior quality is prepared in New England, probably from the intestines of a fish. It is in the form of thin ribbands several feet in length, and from an inch and a half to two inches in width. It has been used to a considerable extent in this country, but is less soluble than the Russian, and affords a dark coloured solution.”

The articles on *ippecacuanha* and jalap evince much research and discrimination, particularly the latter.

*Litmus*.—Cudbear is prepared not only from the *Lichen tartareus*, but also from many other species, which are not only procured in the north of Europe, but also in Labrador and other countries.

*Manna*.—From a recent account, it appears that another kind of manna has been discovered in New Holland, this is the product of the *Eucalyptus mannifera*, each tree of which produces several pounds. It resembles the manna of Europe except that it is less nauseabond.

The general observations on the fixed and volatile oils are useful, but we do not conceive that the rules given for the detection of the adulterations so often practised, particularly as regards the latter. This subject requires a close examination and repeated experiments.

*Palm oil*.—The authors are in all probability correct in attributing the origin of most of the palm oil used in the United States to the *Elais guiniensis*, though there is no doubt but that the *Elais (cocos) butyracea* and other species of palms also furnish some of that imported.

*Oleum tiglii*.—The authors have fallen into an error as respects the seeds furnished to them by Dr. BURNOUGHs. These were not the produce of a different species of croton, but of the *Jatropha curcas*, which is also a native of South America.

*Opium*.—This article is copious and well drawn up, though we think

that it is deficient in the descriptions of the various kinds of opium of commerce. Much interesting information on this head will be found in a memoir by M. GUIBOUT in the *Journ. de Pharm. Dec.* 1831.

*Panax quinquefolium*.—From the laborious investigations recently undertaken with regard to the ginseng, it appears that the root or roots so highly esteemed by the Chinese, are not furnished by the *Panax quinquefolium*, and that this article has been only used as a substitute for them. The authors should have noticed that considerable quantities of this drug are prepared for the Chinese market by being clarified, in which state it commands a higher price.

*Prunus virginiana*.—The wild cherry bark of our shops is derived not only from the *P. virginiana*, but also from the *P. serotina* a closely allied species.

*Rheum*.—We have been highly gratified with the manner in which this subject is treated, and are sorry that our limits will not permit our transferring it to our pages.

*Rhus glabrum*.—We perceive that the authors have inadvertently quoted Dr. FAHNESTOCK of Lancaster as the author of articles in this Journal, on the medical effects of the *Rhus glabrum* and *Myrica cerifera*; this is an error, they are due to Dr. WILLIAM M. FAHNESTOCK of this city.

*Madder*.—From some late experiments of MM. GAULTIER DE CLABRAY and PERSOZ, it would appear that the colouring matters obtained by former chemists are not the true colouring principles of this drug. Instead of the alizarin and xanthin they have produced a red colouring principle differing from the former, and a splendid rose-coloured substance, that is likely to be very useful in the arts.

*Scammonium*.—We would advise an attentive perusal of the observations on the distinguishing marks of the different substances which come to our market under this name. As is observed, the Aleppo scammony seldom reaches us in its purest state; in confirmation of this remark of the authors, we would state that we searched the shops in this city in vain for an article answering to the description given of this article.

*Senna*.—This is admirably treated on, and will amply repay the reader for any attention he may bestow on it. We think, however, that the authors have adopted an erroneous plan in considering *Cassia fistula* and *C. marilandica* under the head of cassia, and the other officinal species under that of senna, it would have been better in every point of view to have classed the indigenous species with the sennas, by adopting RICHARD's genus *Cathartocarpus* for the *C. fistula*, or to have placed the sennas in GÆRTNER's genus of that name.

The second part of the work as before stated is devoted to the con-

sideration of medicines in their compound form, and is of far more interest to the apothecary than to the physician, though it is replete with information that will be found useful to every medical man; our limits, however, will not permit us to attempt even a cursory examination of it at this time. We deem it due to the authors, at the same time to state, that as far as we have been able to judge, it bears the marks of the same research and discrimination as the first. It contains all the formulæ of the three colleges of Great Britain in addition to those of our own Pharmacopœia, with copious observations on the processes as well as on the medical properties of the preparations.

It only remains for us at present to speak of the mechanical execution of the work. With this we have no fault to find, the number of typographical errors are remarkably few for a treatise of this character, and are principally of such a nature, as to be of little essential consequence; the only objection we have is to its great bulk. That *sine qua non* of a book, the index, is extremely copious and well arranged.

In conclusion we have only to say, that we are fully convinced that no one that consults the pages of this work will be disappointed; whether his object be the acquisition of a general knowledge of the articles of the materia medica, or information on the complex manipulations of pharmacy.

R. E. G.

ART. VII. *Change of Air, or the Philosophy of Travelling: being Autumnal Excursions through France, Switzerland, Italy, Germany and Belgium; with Observations and Reflections on the Moral, Physical, and Medicinal Influence of Travelling Exercise, Change of Scene, Foreign Skies, and Voluntary Expatriation. To which is prefixed Wear and Tear of Modern Babylon.* By JAMES JOHNSON, M. D. Physician Extraordinary to the King. London, 1831. pp. 294. 8vo.

WE take some degree of blame to ourselves for not having noticed the volume before us at an earlier period. Although intended, apparently, for the general reader chiefly, it embraces numerous topics of considerable interest to the physician, and on which he is often called to give an opinion, without being always conversant with all the bearings of the subject. How frequently, for instance, is he consulted by the anxious relatives of the consumptive regarding the